

ILLEGIB

~~TOP SECRET CHESS RUFF~~

NFIC/R-150/62

HIGH-FREQUENCY COMMUNICATIONS RECEIVING SITE NEAR GOLITSYNO, USSR

25X1D

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A high-frequency communications site was revealed on KEYHOLE photography of [REDACTED] near Golitsyno, at 55-35-00N 37-03-10E, 2.5 nautical miles southwest of Moscow (Figure 1). The configuration of the cleared ground patterns indicates that the site contains both fishbone (traveling wave) and rhombic antennas. This installation has been designated as a receiving site because of the presence of the fishbone antennas.

The operational area of the receiving site has been divided into two sections, designated 1 and 2. Section 1 consists of a control area with its surrounding antenna field, and Section 2 consists of a possible control area with its surrounding possible antenna field (Figure 2).

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All the antennas at this site have been constructed since [REDACTED] at which time the area was covered by TALENT photography (Figure 3). Examination of the [REDACTED] photography revealed, however, that the control building for Section 1 and the service road were under construction at that time. The areas for the antennas were cleared of forest cover between the two coverages.

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The antenna field of Section 1 consists of eight rhomboid-shaped cleared ground patterns (for rhombic antennas) and eight rectangular cleared ground patterns (for fishbone antennas) encircling the control area. The dimensions and orientations of the rhomboid patterns indicate operation on both day and night frequencies, and

their specific siting indicates a capability for space diversity reception.

The long axes of the rhomboid-shaped ground patterns lettered A, B, E, and F are oriented on an azimuth of approximately [REDACTED] degrees and those lettered C, D, G, and H are on an azimuth of approximately [REDACTED]. Possible correspondents on the forward azimuths are Arkhangel'sk, Vorkuta, and Igarka (Figure 1). All these cities have transmission facilities.

The clearings for the fishbone antennas at Section 1 are divided into two groups, located on opposite sides of the control area. The rectangular cleared areas indicate that each group consists of four fishbone antennas. The arc of coverage for each pair of side-by-side fishbone antennas appears to be at least [REDACTED] (Figure 4). With this alignment, the reception arc could be either from [REDACTED] 140 degrees or from [REDACTED] to 320 degrees. These ground patterns, however, have similarities of orientation and siting which may indicate a capability for space diversity reception. If a space-diversity relationship is assumed for the fishbone antennas, the most probable reception orientation would be between [REDACTED] and 140 degrees.

The antenna field in Section 2 consists of at least 12 cleared areas encircling a possible control area. Neither the type nor the orientation of the possible antennas can be determined from available photography.

Declass Review by NIMA/DOD

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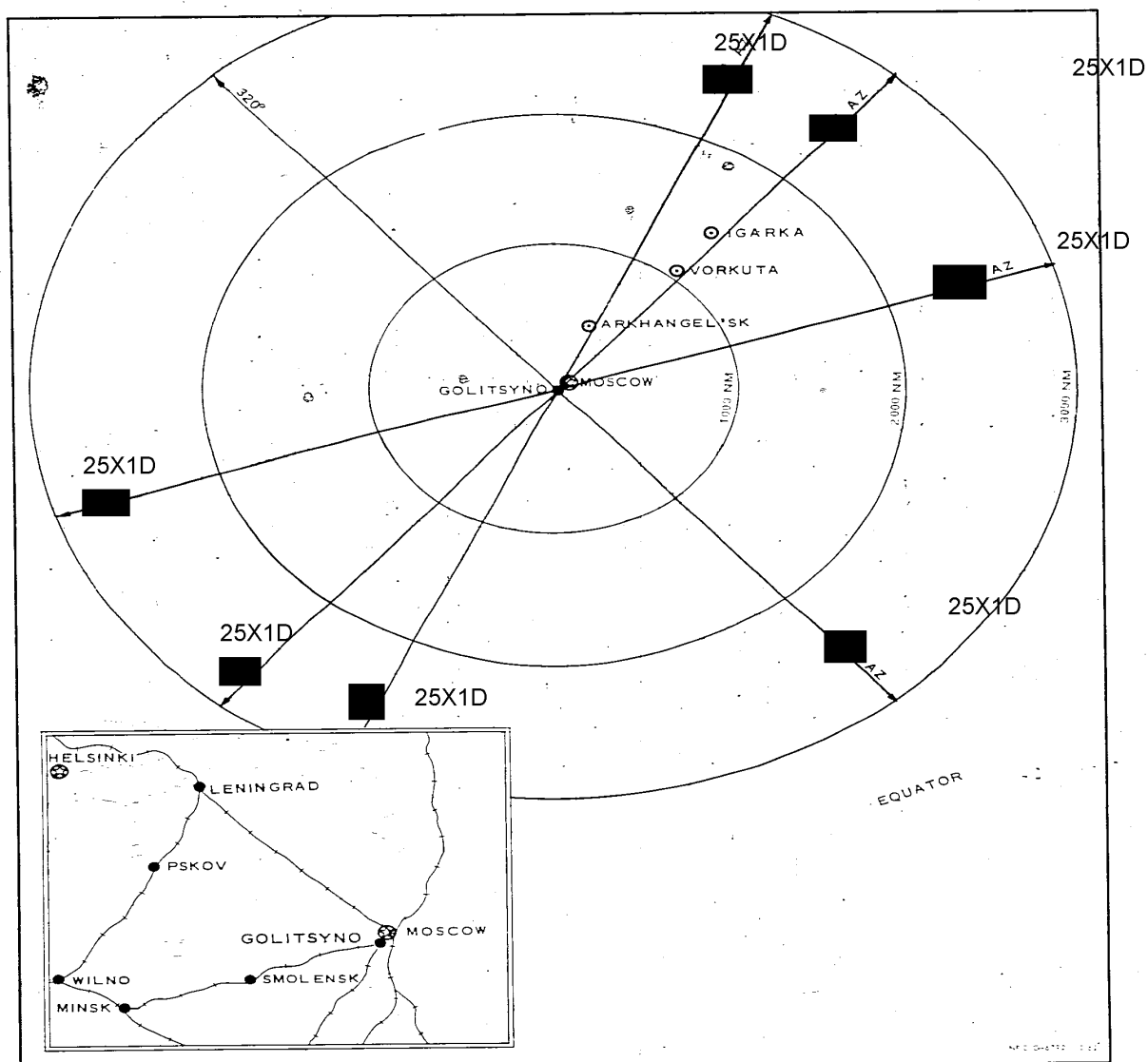


FIGURE 1. AREA ORIENTATION MAP. The azimuths shown are those of the antennas in section A of the high-frequency receiving site near Golitsyno.

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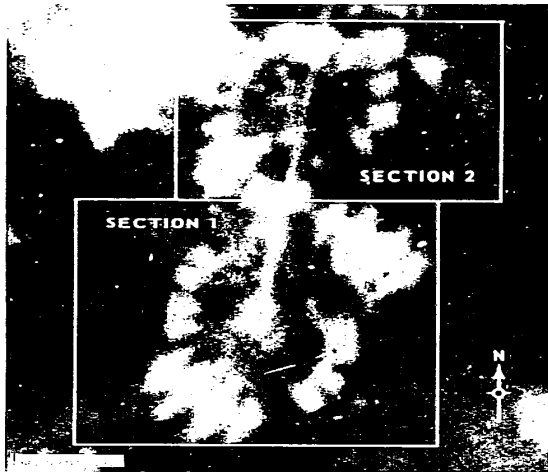


FIGURE 2. HIGH-FREQUENCY RECEIVING SITE AS OF [REDACTED]

25X1D

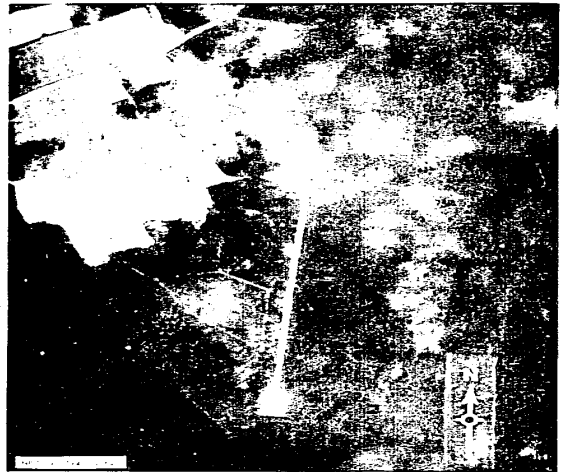
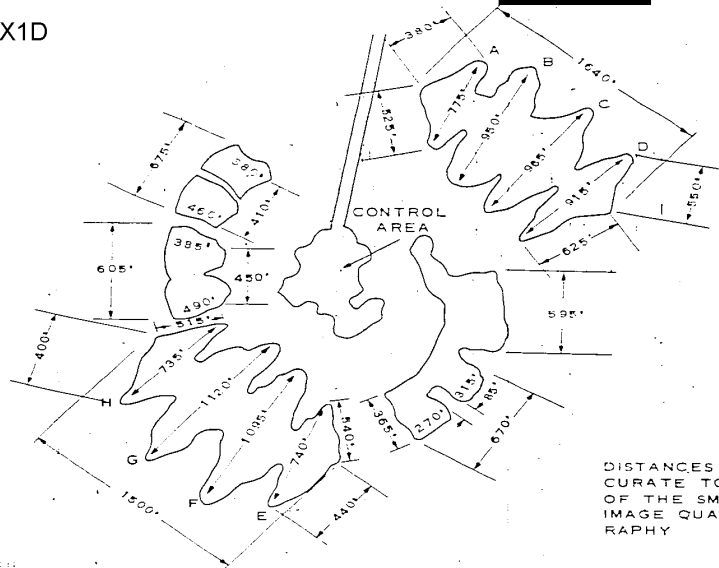


FIGURE 3. AREA OF THE RECEIVING SITE AS OF [REDACTED]

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DISTANCES SHOWN ARE ONLY ACCURATE TO ± 60 FEET BECAUSE OF THE SMALL SCALE AND POOR IMAGE QUALITY OF THE PHOTOGRAPHY

FIGURE 4. SECTION 1 OF THE RECEIVING SITE.

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REFERENCES



MAPS OR CHARTS

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REQUIREMENT

NPIC. PC 53-2

NPIC PROJECT

JN-75 62